Florentin Smarandache

PARADOXURI CUANTICE

Vom prezenta cateva paradoxuri elementare in fizica cuantica.

1) Paradoxul Invizibil Sorites, asociat cu Eubulides din Miletus (secolul patru i.C.):

Lumea noastra vizibila este formata dintr-o totalitate de particule invizibile.

a) O particulara invizibila nu formeaza un obiect vizibil, nici doua particule invizibile, nici trei particule invizibile, etc.

Totusi, la un moment dat, colectia de particule invizibile devine suficient de mare pentru a forma un obiect vizibil, dar nu exista in mod aparent un punct definitiv unde se intampla trecerea de la invizibil la vizibil.

b) Un paradox similar se formeaza in sens opus. Este posibil intotdeauna sa scoti o particular invizibila dintr-un obiect in asa fel incat ceea ce ramane sa fie tot un obiect vizibil. Analog daca se scot doua particule invizibile, sau trei particule invizibile, etc. Totusi, repetand si repetand acest process, la un anumit moment, obiectul vizibil este descompus astfel incat partea ramasa devine invizibila, dar nu exista in mod aparent un punct exact unde din vizibil de transforma in invizibil.

In general, intre <A> si <Non-A> nu exista o distinctie clara, nu exista o frontiera exacta. Unde se termina <A> si incepe cu adevarat <Non-A>?

Se extinde astfel “multimea fuzzy” a lui Zadeh la conceptual de “multime neutrosofica”.

2) Paradoxul Incertitudinii:

Materia larga, care este sub principiul determinist, este formata dintr-o totalitate de particule elementare, care sunt sub principiul indeterminarii al lui Heisenberg.

3) Paradoxul Nestabil:

Materia stabila este formata din particule elementare instabile (particulele elementare libere se degradeaza).

4) Paradoxul Trairii:

Materia larga, cu durata lunga, este formata din particule elementare cu durata foarte scurta.

Referinte:

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[3] Chong Hu, "How do you explain the Smarandache Sorites Paradox?", MAD Scientist, Washington University School of Medicine, St. Louis, Missouri, http://www.madsci.org/posts/archives/970594003.Ph.q.html.

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[5] Leonardo Motta, editor, "A Look at the Smarandache Sorites Paradox", Second International Conference on Smarandache Type Notions In Mathematics and Quantum Physics, University of Craiova, Craiova, Romania, December 21 - 24, 2000;

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[9] Louisiana Smith and Rachael Clanton, advisor Keith G. Calkins, "Paradoxes" project, Andrews University, http://www.andrews.edu/~calkins/math/biograph/topparad.htm.

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